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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/614,867

07/09/2003

Eiji Higuchi

115877

8188

25944

7590

06/04/2004

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EXAMINER

HAMMOND, BRIGGITTE R


ART UNIT

PAPER NUMBER

2833

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/614,867	Applicant(s) HIGUCHI ET AL.	
	Examiner Brigitte R. Hammond	Art Unit 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/9/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumura 6,576,838 in view of Ishitani et al. 5,154,647. Matsumura discloses a fuse containing box 210 for directly connecting to and mounting on a battery, the fuse containing box comprising: an upper and lower case 221,211, each made of a resin; a supporting plate 261 housed between the upper and lower case and made of a resin, the supporting 261 plate including a battery fuse, and a bus bar 253 connected to a terminal (not shown) of the battery fuse. Matsumura does not disclose the upper and lower case being a polypropylene-based resin, nor the supporting plate being a heat-resistant nylon-based resin. However, polypropylene-based resin casings and heat-resistant nylon-based resin supporting plates are well known in the art as evidenced by Ishitani et al. Ishitani et al. disclose an upper 3a and lower case 3b being made of a polypropylene-based resin or alternately a heat-resistant nylon-based resin (col. 3, lines 34-35). Therefore it would have been obvious to one of ordinary skill to modify the box of Matsumura by making the casing of a polypropylene-based resin or the supporting plate of a heat-resistant nylon-based resin since both polypropylene-based resins and heat-resistant nylon-based resin are known for their heat resistant qualities as taught by Ishitani et al.

Regarding claim 2, Ishitani et al. discloses resin parts being made of a mixture of nylon 66 and polyphenylene ether (PPE) col. 5, lines 50-51. It would have been obvious to one of ordinary skill to make the supporting plate of Matsumura formed from a

mixture of nylon 66 and polyphenylene ether (PPE), since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious engineering choice. In re Leshin, 125 USPQ 416 (CCPA 1960).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumura and Ishitani et al. as applied to claim 1 above, and further in view of Yasukuni et al. 5,734,124. Neither Matsumura nor Ishitani et al. disclose the upper case being formed from a mixture of polypropylene and an elastic resin; and the lower case being formed from a mixture of polypropylene and talc. However, Yasukuni et al. discloses it is well known to have the upper and lower casings of a fuse containing box formed of various mixtures including polypropylene and an elastic resin, and polypropylene and talc (col. 2, lines 1-15). Therefore, it would have been obvious to one of ordinary skill to modify the upper and lower casings of the fuse containing box of Matsumura as modified by Ishitani et al. with polypropylene and an elastic resin and/or polypropylene and talc since both mixtures are well known for their heat-resistant qualities as taught by Yasukuni et al.

Allowable Subject Matter

Claims 4-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: regarding claim 4, patentability resides, at least in part, in the supporting plate having a locking piece vertically formed on the supporting plate, the locking piece having at an upper end a bus bar fixing claw that horizontally projects to lock the bus bar in place, in combination with the other limitations of the base claim.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gregory, II et al. 6,126,458, Hutchens 6,494,279, Higuchi et al. 6,723,920 and Witek et al. 5,882,213 were cited for similar fuse containing boxes.

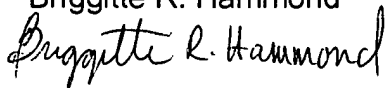
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brigitte R. Hammond whose telephone number is 571-272-2006. The examiner can normally be reached on Monday-Thursday and Alternate Fridays from 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A Bradley can be reached on 571-272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2833

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brigitte R. Hammond

A handwritten signature in cursive script that reads "Brigitte R. Hammond".

May 20, 2004